REVIEW ARTICLE ON THE BARRIERS IN HEALTH CARE INFORMATION TECHNOLOGY ADOPTION

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ABSTRACT

Research history on the adoption of information technology has a history of more than 30 years. During this period, different theoretical models have been designed and implemented to evaluate an individual's adoption of new technology. TAM is one of these approaches. In ongoing many years, a few models have been proposed in the area of innovation acknowledgment. Among these models are the "Assignment Technology Fit (TTF) model," the "Innovation Acceptance Model (TAM)," and the "Bound together Theory of UTAUT model." IT speculations to foresee the reaction of end-clients in IT are vital. As far as innovation acknowledgment, there are numerous speculations and examples, some of which have been utilized in the medical care field. The UTAUT model, as a coordinated hypothesis.

Keywords: *Theoretical model, Technology acceptance model, technology fit model, UTAUT model, electronic medical records, HIS, adoption, barriers.*

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INTRODUCTION

Right now, technology improvement has become one of the essential components in associations, with the goal that the impacts of changes in the social, monetary, and political frameworks have been more than the actual advances. Companies are increasing investments in new technologies in order to improve their access to information and gain competitive advantages. Global competition requires organizations to reduce cost, increase productivity, and increase their dependence on information technology (1).

The wellbeing framework was not a long way from the results, yet the paper records, on account of their own restrictions, are not equipped for legitimate correspondence between wellbeing specialist organizations, and the information that are required may not be accessible as quickly as possibly (2).

To tackle the issue, advancing toward wellbeing data frameworks started around 30 years prior, and a definitive objective of this development was to work on the admittance to electronic wellbeing records (3). Utilization of data innovation in different areas of medical care, especially in emergency clinics, can possibly work on the nature of administrations given and the productivity and viability of staff, and likewise lessen a portion of the authoritative expenses (4).

Studies have shown that involving electronic records in the present complex wellbeing framework faces many difficulties that require hierarchical arrangement and labor force availability. Specialists and policymakers who are running another data framework can quantify the acknowledgment of the framework among the objective populace. Estimating the acknowledgment will help with the effective execution of a framework. Accordingly, before the execution, specialized and non- specialized factors should be distinguished, and the boundaries to execution should be disposed of (5).

HIS is an integrated information system that plays a key role in supporting the hospitalsthrough the use of appropriate health care information technology. Hospitals are getting more and more dependent on the capabilities of HIS for diagnostic, administrative, andtraining processes to improve the quality of their services and performances.

Although HIS often improves the quality of services and reduces costs, it needs to assess its users to ensure better quality, reliability, and maintenance. Understanding thereadiness and willingness of nurses to implement new information technology is criticalsince they are the largest group of end users of the system and their ability in clinical decisions is an important factor influencing the quality of care. Moody found that nurses' attitudes toward and their perception and understanding of HIS, have impacts on computerized medical records. Lee (2006) found that; knowledge, experience, and judgment of nurses can be promoted through computer technology.

of eight different models, is essential in innovation acknowledgment (5).

The healthcare sector is perhaps one of the largest and rapidly growing industries in theworld with a market value of 7.6 trillion USD (EIU, 2016). As per an estimate, by 2020 the global spending on healthcare is expected to reach 8.7 trillion USD, possibly due tothe improved integrated healthcare services that has increased the cost and life expectancy [1]. Health information systems must ensure safe and effective medicationuse, improved health outcomes and quality of services at a reduced cost [2].

We live in a new well-connected world, dominated by the internet. Healthcare is recognized as an industry with a low acceptance of information technology. Only few Information technology (IT) systems, such as Electronic Health Records (EHRs), have been widely accepted by the US industry [6].

The rate of implementation of integrated healthcare IT systems, similar to business Enterprise Resource Planning software, is low, and the basic solutions provided by Microsoft dominate the market. This poor acceptance has been associated with different causes such as the different revenue streams within the industry (public, individuals, and companies), the multiple employee's categories and the lack of their proper training, the complex outsourced infrastructure for different and not interconnected organizational processes, the high costs for computerization, and the organizational culture as a whole. This low acceptance of integrated solutions diminishes continuous improvement capabilities, since most used techniques as lean management, Six Sigma, and Lean Six Sigma are implemented based on data availability [7].

The research concerning health-care information technology has been focused in time with analyzing the impact of technology adoption, more papers providing evidence on the positive impact it has towards medical outcomes, but the outcomes concerning costs are contradictory. In this context, being a manager who must take IT solutions' adoption or replacement decisions is not an easy job. This article is an analysis of different literature reviews concerning how managers should adopt information technology in health care, the results being a structured and condensed perspective, using a Technology (What?)-Context and before adoption Analysis (When and Why?) – Implementation (How?) – Outcomes (What for?) framework. This framework is similar to the frame works used for design propositions in general and it can be used as a reference by practitioners during IT systems 'adoption. The construction of this framework is required by both practice and research since most

papers cover narrow topics concerning IT adoption and fail to cover the needs of clinicians, health-care administrators, and health-care policymakers(Jonesetal.,2014). The paper is structured as followed: Section 2 details the used methodology, Section 3 contains the results by the use of the already specified framework, while Section 4 presents the discussion and conclusions [8].

The adoption of health information management systems in developing countries is perhaps worse than the developed ones. A study found the major influential factor that Decreased acceptance level towards the health information system in Saudi Arabia was the unavailability of computers particularly laptops. Another study conducted in Saudi Arabia highlighted that hospital size had a linear relation with the adoption of health system technologies [9].

Moreover, a study conducted in Malaysia reported that only 15.2% of the public hospitals had implemented the electronic health reporting system. However, to counter such low levels of adoption, the Malaysian Government had taken various initiatives in the past. From 'Seventh Malaysian Plan in 1996' to '10th Plan in 2010', the government had not only been making efforts to recognize the role of information and communication technologies but also had appreciated the use of such technologies in the health systems. The plan proposed to build 33 complete paperless hospitals in the public sector. Nevertheless, a study reported that only 21 out of 138 public sector hospitals in Malaysia had implemented the electronic medical recording and reporting system either in one department or in all units. A few East Asian countries like Singapore, Hong-Kong and Taiwan were found relatively more active in the adoption of health information technologies in comparison to countries having high adoption rates like Canada, England and Australia [10].

Factors associated with effective implementation of healthcare information technology:

Major barriers identified in successful adoption include lack of capital, maintenance related costs, attitudes of healthcare professionals, unavailability of staff and countlessreturn on investment. Besides this, technological, environmental, organizational and human factors were also identified as the major barriers to successful adoption. Three primary challenges to prosperous adoption including; institutional challenges, human & social influence and challenges related to technology were highlighted by a study conducted in Malaysia. Besides this, factors related to behavior and attitudes towards acceptance and use of technology had also been reported[13].

Attitude, lack of training and skills, policies and little administrative support were highlighted as the major barriers towards successful adoption in Indonesia [15]. Lack Of technology was identified as the primary influential factor that decreased acceptancelevels of health information technologies in Saudi Arabia [13].

The possible barriers to implement HIT as follows:

- Structure of the organization, the tasks performed, the incentives given, and the way information processes are developed and organized [8].
- The adoption of digital technology is a complex process with several influencing factors on the individual level, such as perceived ease of use and usefulness, training, helping conditions, and personality traits, as well as computer anxiety and self-efficacy [9].
- Negative and positive emotions influence the learning process and must beacknowledged during training [3].
- As such, the uptake of HIT by health professionals does not always matchexpectations [5].

  There is a growing awareness and general acceptance of the need for a sociotechnical approach to the implementation of HIT, emphasizing the importance of focusing on the social aspects of HIT implementation as well as on the technicalaspects of a system. The implementation process is far from linear and predictable,and the fit between work processes and tasks, information technology.

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